

Docket No. 265125US2PCT

10/523815  
DT01 Rec'd PCT/PTC 04 FEB 2005

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

IN RE APPLICATION OF: Toshimitsu KOHARA, et al.

SERIAL NO: New U.S. PCT Application Based on PCT/JP03/10115

GAU:

FILED: Herewith

EXAMINER:

FOR: METHOD FOR PREPARING ALUMINA COATING FILM HAVING ALPHA-TYPE CRYSTAL STRUCTURE  
AS PRIMARY STRUCTURE

INFORMATION DISCLOSURE STATEMENT UNDER 37 CFR 1.97

COMMISSIONER FOR PATENTS  
ALEXANDRIA, VIRGINIA 22313

SIR:

Applicant(s) wish to disclose the following information.

REFERENCES

- ☒ The applicant(s) wish to make of record the references listed on the attached form PTO-1449. Copies of the listed references are attached, where required, as are either statements of relevancy or any readily available English translations of pertinent portions of any non-English language references.
- ☐ A check or credit card payment form is attached in the amount required under 37 CFR §1.17(p).

RELATED CASES

- ☐ Attached is a list of applicant's pending application(s), published application(s) or issued patent(s) which may be related to the present application. In accordance with the waiver of 37 CFR 1.98 dated September 21, 2004, copies of the cited pending applications are not provided. Cited published and/or issued patents, if any, are listed on the attached PTO form 1449.
- ☐ A check or credit card payment form is attached in the amount required under 37 CFR §1.17(p).

CERTIFICATION

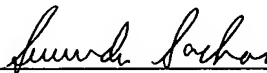
- ☐ Each item of information contained in this information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this statement.
- ☐ No item of information contained in this information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application or, to the knowledge of the undersigned, having made reasonable inquiry, was known to any individual designated in 37 CFR §1.56(c) more than three months prior to the filing of this statement.

DEPOSIT ACCOUNT

- ☒ Please charge any additional fees for the papers being filed herewith and for which no check or credit card payment is enclosed herewith, or credit any overpayment to deposit account number 15-0030. A duplicate copy of this sheet is enclosed.

Respectfully submitted,

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New U.S. PCT Application Based on PCT/JP03/10115  
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### STATEMENT OF RELEVANCY

- 1) References AA-AC & AO-AS have been cited in the International Search Report. Copies of these references are being submitted herewith only when not automatically provided by the International Searching Authority.
- 2) References \_\_\_\_\_ have been cited in the corresponding \_\_\_\_\_ Search Report. A copy of these references is being submitted herewith.
- 3) References \_\_\_\_\_ are discussed in the specification. A copy of these references is being submitted here with.
- 4) Reference AT-AW is additional prior art known to Applicant. A copy of these references is being submitted herewith.

1. JP-2742049 (1998)

PROBLEM TO BE SOLVED: To apply alumina coating to a base body of a cutting tool, which is sufficiently tough and which can be formed easily.

SOLUTION: A coating cutting tool is provided with a cutting face 12, a flank 14, a cutting edge 16, which is on the jointing part between the cutting face 12 and the flank 14, a base body 18, and a coating, which is joined to the base body 18. The coating consists of an IVB-metal-aluminum alloy layer 20, which is deposited to the base body 18 through a physical vapour deposition and an alumina layer 22, which is deposited to the IVB-metal-aluminum alloy layer 20 through the physical vapour deposition.

2. JP-A-2002-53946 (2002)

PROBLEM TO BE SOLVED: To provide a useful hard film with which an aluminum oxide of corundum structure having excellent heat resistance, wear resistance, etc., can be formed under a low-temperature condition which does not cause deterioration in the characteristics of a base material.

SOLUTION: An oxide film of corundum structure having 4.779 to 5.000 Å; lattice constant and at least 0.005  $\mu$  m film thickness is formed. Then, the aluminum oxide film of corundum structure is formed on one side of the above oxide film. Further, an oxide film composed of any of Cr<sub>2</sub>O<sub>3</sub>, (Fe, Cr)<sub>2</sub>O<sub>3</sub> and (Al, Cr)<sub>2</sub>O<sub>3</sub> is recommended as the above-mentioned oxide film.

Form PTO 1449 (Modified)		U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE		ATTY DOCKET NO. 265125US2PCT		SERIAL NO. <b>10/523815</b> New U.S. PCT Application Based on PCT/JP03/10115	
LIST OF REFERENCES CITED BY APPLICANT				APPLICANT Toshimitsu KOHARA, et al.			
				FILING DATE Herewith		GROUP	
<b>U.S. PATENT DOCUMENTS</b>							
EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUB CLASS	FILING DATE IF APPROPRIATE
	AA	5292417	03/08/94	Balzers AG. (Equivalent to JP 6-128742)			
	AB	6217720	04/17/01	National Research Council of Canada (Equivalent to JP 10-330934)			
	AC	5693417	12/02/97	Fraunhofer-Gesellschaft			
	AD						
	AE						
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	AJ						
	AK						
	AL						
	AM						
	AN						
<b>FOREIGN PATENT DOCUMENTS</b>							
		DOCUMENT NUMBER	DATE	COUNTRY	TRANSLATION YES NO		
	AO	2002-212719 ✓	07/31/02	JP(with English abstract)			NO
	AP	2001-234338 ✓	08/31/01	JP(with English abstract)			NO
	AQ	2001-342556 ✓	12/14/01	JP(with English abstract)			NO
	AR	2001-335917 ✓	12/07/01	JP(with English abstract)			NO
	AS	00/68452 ✓	11/16/00	WO(Equivalent to JP 2002-544379)			NO
	AT	2742049 ✓	1/30/98	JP			NO
	AU	2002-53946 ✓	2/19/02	JP			NO
	AV	4-325680 ✓	11/16/92	JP			NO
	AW	4-136165	05/11/92	JP			NO
<b>OTHER REFERENCES (Including Author, Title, Date, Pertinent Pages, etc.)</b>							
	AX						
	AY						
	AZ						<input type="checkbox"/> Additional References sheet(s) attached
Examiner					Date Considered		
<p>*Examiner: Initial if reference is considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.</p>							